

AFRICAN TRIP 1957-58
EMBID CULTURES

AFRICA 1957-58
TANZANIA - SOUTH

L'OPENBA YAKK

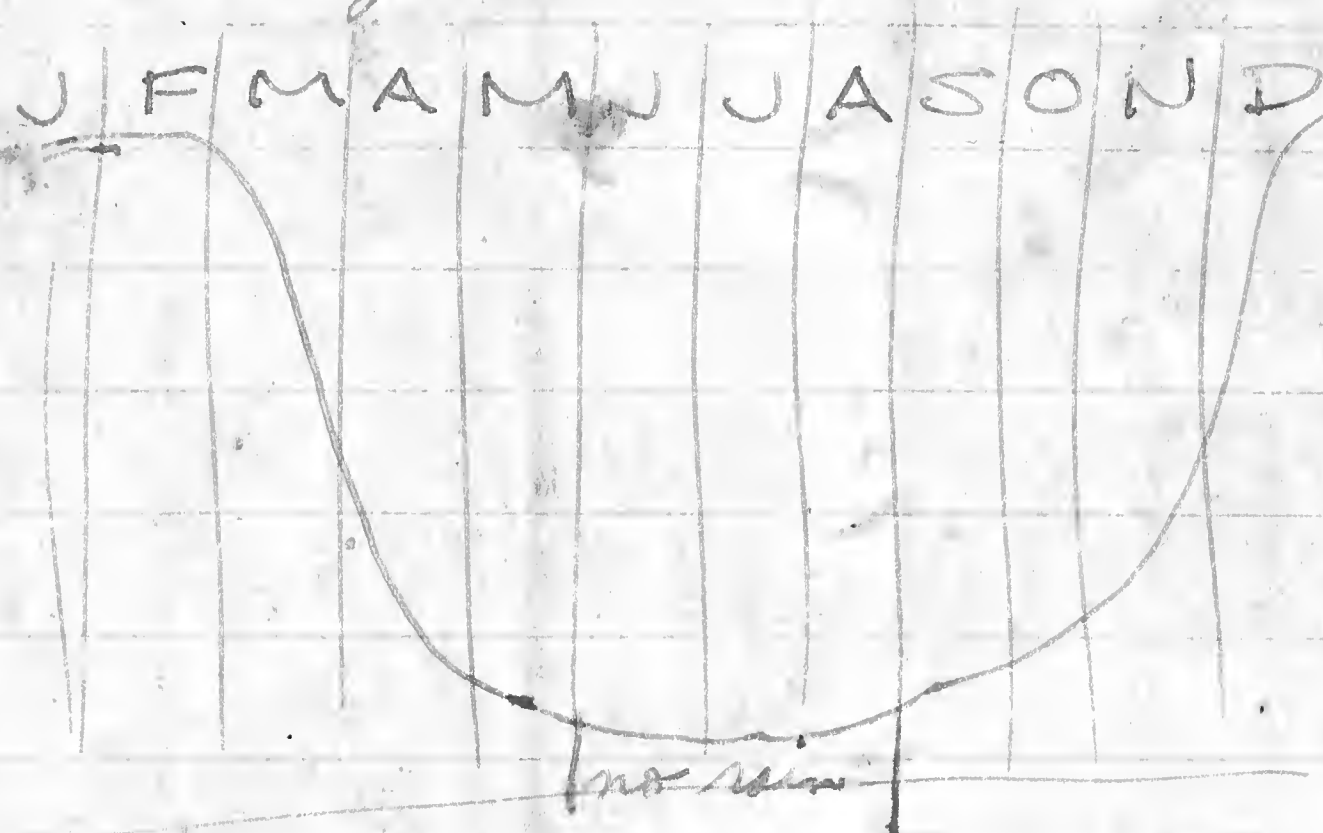
1st camp

MUYE

2nd camp

MUNOWE near LIFIRA R. 850 M

Rainy months



Gerontomorphic Specialized or
exaggerated features

Pedomorphic Infertile characters in
adults

Embroid notes

Tanganyika: Ngare Nanyukee 1500 M X-29-57

Type locality of *Cephalambria sjostedti* Silvestri

Dry savanna on flats NE. of Mt Meru!
dry grass with scattered, rather large, flat-top-
ped trees. Area with numerous small hills
of lava rock. Embroid rather common under
lava stones. Large white tunnels lead into
soil cracks also radiate on ground ^{surface} and grass-
root level outward from stone. In spite
of dry conditions (no rain for months) embryos
were often found in tunnels without the need
for excavation. The short rain season was
about to begin and the sky was overcast
and slight drizzle fell on this date.

All embryos were in about the same
instar — apparently penultimate. Potential males
were evident by their large heads.

No embryos were found associated with
tree trunks or bark.

Dec. 14 14 mature ♂ 6 mat ♀ few ^{penult} young collected

No eggs or progeny in sight

Negative areas

Mtn. Forest on E. slope of Mt. Meru 1700 M
Primary forest in excellent condition. Bark
conditions apparently suitable for embiids
but apparently none present.

x-28-57

11 Mi. E. Moshi 890 M x-29-57

Dry low savanna on rocky hillside
Fresh tunnels of small embiid sp. present
under granular lava rock but no embiids
at surface. Probably a new Gnathembia
Soil too crumbly to permit excavation.

13 Mi E. Moshi 880 M x-29-57

Creek in above zone bordered by large
trees. No embiids evident in bark which
is either too smooth or devoid of moss and
lichens.

Marangu, S. E. Slope Kilimanjaro 1440 M. x-29-57

Trees along creek possible embiid trunks
but nothing collected. Whole area densely
populated and biologically disturbed.

11. sp. + Gen? Kenya: 9 Mi E TAVETA
x-30-57

CEPHALEMBIA

Thorny scrub with scattered baobab trees,
valley plain, reddish soil, no stones.

Recent rain, ground moist but not
yet time to green vegetation.

Embiids on surface ~~of~~ elevated by termites
at base of baobab. Tunnels radiate in
buried matted leaves and twigs in
reddish soil. By scraping away leaves
some tunnels can be seen at surface.
Generally they follow soil tunnels.

Many 2nd(?) instar young associated
with old ♀ tunnel centers but no adults
seen. One brood more advanced — one
individual was a large ^{ante-}penultimate ♂

GNATHEMBIA

KENYA: 45 MI. E. TAVETA X-30-57

GNATHEMBIA

Vertical ditch wall in dry, low-thorn forest which had had some rain earlier in the season (lilies sprouting, aloes in bloom)

One embiid colony radiated in three directions from a tube in the bank.

One adult male with female present

♂ preserved, ♀ cultured. Appears to be Gnath-
embia

KENYA: BURA HILLS

Northern section visited. All thorn scrub on reddish soil. No stones, thus no Cephal-
embia found.

Recent heavy rain (several inches in one period) appears to have drowned out many colonies. Fresh tunnels more frequently matted down than occupied.

TERATEMBIID

KENYA: TEITA HILLS 1500 M XI-1-57

Remnants of Mtn forest on jagged, old granitic outcrops. Area of relatively heavy rainfall. Small teratembiid in and under bark of small dead tree (6" diam.).

Prob. same sp. collected 1170 M on large tree bordering creek. In mossy bark. Rare. All cultured together.

Recent rain

KENYA: MWANGERE HILL 11 Mi. S of MAMTAU

CEPHALEMBIA BURENSIS (R.-K.)

XI-2-57

Recent rain

This hill may be considered a part of the Bura Hills as it is the last western remnant. The Hill is almost solid ^{granitic} rock, but through exfoliation, slabs have become loose and imbedded in the surrounding reddish soil at its base and on its surface. This provides cover for colonies of Cephalembia burensis.

One colony was also found in loose bark at the base of a dead tree.

One ^{adult} male and a female were seen walking on ground outside of tunnels at dusk. Nearly all tunnels were in grass bases without stone cover.

Under above rocks colonies of a smaller sp (Gnathembia?) found sparingly. None mature.

In bark of dead Acacia small sp. also found and cultured. May be a teratembrid. Male found XI-3-57 also penult.

D

Discontinued Parth sp Pointe Noire #3 XI-4-57
infertile egg laid ♀ died

31 Mi N.W. Mombasa 375 M

Ordinarily-dry savanna hillside shortly after rains. Small embiid tunnels rare under flat slabs of sandstone. 1 juv (sex?) cultured. Such caught one adult ♂ which appears to be a Gnathembia.

RHAGADOCHIR VOSELLERI

10 Mi N.W. Mombasa 230 M

Crest of slope above Indian Ocean. Climatic zone distinct from inland thorny savanna. Apparently frequent rain throughout year. area appears to have once been continuous forest.

Collected in small cyn with ^{poor} remnant forest. Saundersii on and in hard bark in wood.

2 immatures had rows of sclerogibbid larvae totalling 10 at least per insect. On abdomen.

Sclerembia-like sp. also on and in dry bark. Tunnels very similar to Congo forms.

Small teratembrid seen in bark of limbo on ground. Not cultured.

KENYA XI-6-57

RHAGADOCHIR

CHA SIMBA FOREST RES., KWALE 1200' EL

Sp. 1 Large colonies on ^{low} stump surface, also extending into matted leaves at base. Typical colonies on trunks of coarse-fleked bark. Tunnels follow interstices of elevated flakes and extend into layers and beneath. This species has entirely black ♀s with pale band ^{around} basal third of abdomen. Juveniles pale ferruginous in all stages from egg masses to penultimate depending on the colony.

Sp. 2

Minute pale teratembid in long dead snag. Individual tunnels follow roughening and scolytid-like borings.

Virgin hill forest on escarpment above Indian Ocean. Mixed species with cycads and epiphytic ferns, vines etc. Not a high forest

KENYA XI-8-57

DIANI MOSQUE (SIMU BEACH) about 20 mi S. Mombasa

Dry coastal brush on sand and coral behind beach. Mixed brobabo trees.

Minute teratembid (sp 2 opposite) common in bark flakes of small shedded trees. Esp. common on underside of 2-3" limbs lying in leaves and sand on ground. All stages present males all penult except one adult collected.

Oligotoma saundersii mixed with above.

28 mi S.W. Kwale, Kenya

Park-like savanna, green grass. Fens removed from towns.

Above two species present

AMANI XI-9-57

Teraterbiid (pale with black head) common in same niche as rossiellii. 3 adult ♂ collected several penult and many ♀ & young. Species prefers punky bark.

10 Mi E. Amani XI-12-57 160 Meters

E base Usambara Mts near saw mill. Secondary low forest rather dry type but recent rains. Small black teraterbiid very common under bark flakes of dead and living trees, trunks and branches. Many mature ♀s, few adult ♂, many penult ♂.

10 Mi W. Korogwe ^{XI-11-57} Savanna Woods 300 M

1 ♂ saunderii came to light

No attempt made to search for embiids

2-3 Mi N. Mombasa 550 M XI-12-57

Grassy slope with thorn scrub & stones. Trace of Entherbia under stone.

1 ♂ saunderii in dead leaves at base of tree.

4 Mi N. Mombasa 830 M XI-12-57

Small Cyn in above zone, dense brook-side trees. Few minute teraterbiids under thin bark flakes. Cultured but little chance of survival.

Between Korogwe and Morogoro XI-13-57
passed through miles of dry savanna woods, S. of Handeni near ^{N.E.} base of Mts. Forest became high and dense without trace of embiids.

XI-16-57

BUNDUKI, S. slopes of ULUGURU MTS.

1200 M XI-14-57

Small black teratembid in roadside moss, rotting stumps and bark crevice. Very rare, few individuals cultured.

Area cleared of Mtn. forest but patches along streams

20 Mi S. Morogoro XI-15-57

Savanna Woods, rocky area

1♂ *saundersii* along road, no trace of other embiids

Whole stretch 100 mi S.W. of Morogoro was Savanna woods frequently burned, occasional stop revealed no embiids

Beginning about 60 Mi N.E. Iringa floral and faunal change to Xeric probable stone embiid country.

55 Mi N.E. IRINGA, TANGANYIKA 575 M

River valley hill at margin, densely covered with low thorn forest mixed with baobab. Normally very dry but this date spring-like with fresh grass, leaves, blossoms, ground damp with recent rain. Large colony of young *Gnathembia* (?) under flat stone the surface beneath densely covered with seed and grass debris collected by *Pheidole* ants. Embiid tunnels ramified through this. All appeared to be one brood — about 3rd instar. No adults. Few other colonies collected, but smaller.

6 Mi N. Iringa on Dodoma Rd.
High savanna woods with rocks
but extremely dry. One empty
embryo colony under about 50
stones turned. Rains will not
begin until Dec 15. 1475 M

21 Mi N. Iringa on Dodoma Rd
1200 M

Savanna woods on shaded slope
of rock-studded hill. Suggested
live-oak forest in August. Very
dry but 2 spp embryos. *Dihybo*
and *Gnathambia* in matted leaves
at edges of stones and beneath.
1 adult of *Gnath.* collected (apertures)
Dihybo adult ♀ and young
bright orange and black sp.

Nov. 18, 1957

4 Mi N. Kolo, Tanganyika (Dodoma - Arusha)

Escarpment on western edge of rift
Covered with low mixed forest (suggest gnarled
live oaks). Numerous lichens on bark suggest
misty climate.

Teratobia occur in lichen clumps on
underside of freshly cut limbs on
ground. Tunnels lead into bark crack retreats
Females and ^{very} young present. One perult of
all cultured.

1 juv of *Dihyboranus* (orange + black)
found under dead limbs in open, dry
glade in above forest.

Nov 18
30 Mi N. Kolo 1590 M (Stop 239)

Negative search in forest strongly
suggestive of Kwaile type

Nov 19

Sjostedt: collected in ravine 6 mi
S. Ngare Nanyuki. All perultimate instar.
Recent rain.

Embryos absent on ^{1st} granitic hill north
of Mt Meru

Namanga 1300 M XI-19-57

Brushy, rocky zone at base of
large mtn of granite.

Gnathembia (?) rare under stones.

Recent rain. 1 perult ♂ + females. Cultured.

Tunnels in bare soil narrow, white, one embryo
per tunnel. Laid down soil cracks.

Athi River 1500 M XI-20-57

Lava boulders in acacia scrub. Recent
rain. Gnathembia (?) very rare under

stones. No trace of large tunnels.

Similar sp. apparently at storey
Athi but all embryos absent at
granitic bluff beyond (about 5 mi SE.
Athi river.).

XI-22-57 Bluffs above N.E. rim of rift valley S.W. of Ngong Hills (32 mi S.W. Nairobi) 1500 M.

Lava boulders beneath low Acacia.
Rain of recent date. Adult "D" rimskyi;
(?) present

XI-22 and morn of 23 1957
25 mi N of MAGADI 900 M.

Stones near and under large Acacia in volcanic area ~~seen~~ at edge of rift valley. Recent rain: rimskyi (?) common at edge of stones and tunnels extend in superficial matted leaves & grass between rocks on ground surface.

Many adult ♂, females, eggs and some 1st instar young. Large tunnels lead down soil cracks.

Orange and black Dihybo found in one colony under limb (4" diam.) on

ground beneath Acacia. 1 female and several (3rd(?) instar).
Note: XII-21-57 Female brought ^{during nite} numerous bits of lettuce down into depths of tube. Must be method of bringing fresh, succulent food away from exposed and drying surface areas

Nov 26 6 mi S. Kisumu, Kenya 1200 M

gently sloping low savanna numerous lava rocks, recent rains Navasilla & Gnathembia quite common under stones penult males and few adults present
Also few mi S. at 1300 M

S.W. Uganda (rainy season)

25 Mi S. MBARARA XII-6-57

1375 M Rolling grassy hills + thorn
bushes. Embiids in stoney road bank. Follow
crevices between rocks and radiate on surface.
Stomach asexual, reddish. Sclerobia B+W ♀
eggs + all stages of young some permlt.

8 Mi N. KIKAGATE XII-6-57

1200 M Kagera River cyn,
Rocky slopes with oak-like trees
Red + Bl ♀ and 1st instar young in
dead branch end of corky-barked tree
(*Brachystegia*?) Prob *Dibytocerus* n. sp.

Sclerobia ♀ + young in some inches
tunnels in bark of dead limbs,
in roots of orchids etc.

20 Mi S. MBARARA XII-5-57

1350 M grassy valley and acacia
savanna. Thickets along creeks and on
termite mounds

4 Miles northeast of Elizabethville
on Kaxungo Road Jan 25, 1958

Rainy season. Savanna woods with profuse
understory vegetation and grass

Emoia common in silk nests spun on
leaves, between leaves (living or dead)

No contact with ground.

Each nest occupied by adult ♀ and
egg mass (packet of eggs in matrix of
masticated food, densely bound in coating
of silk). No 1st instar hatched yet.

Several nests seen which had been torn
open by some predator.

Silk of this species not coated with
debris or feces. Silk clean and white.

Occasionally two ♀s will form contiguous
nests side by side.

= D. collaris Navas

Dihydrocerus colonies common on surface
of dome-like termite mounds - occasionally
in dead bark and crevices of limbs and
trunks. Each colony occupied by adult
♀ and eggs and 1st instar young - no ♂s.

Colony consists of sheet center covered
with debris and occasionally earth, with
radiating surface tunnels. Food apparently
microscopic moss + lichens on surface
of termite mounds. Tunnels converge in
central nest area spun in holes on
surface of mounds.

Scutellinia B & W ♀ in bark crevices
and beneath flakes - dry bark, seldom
mossy. Eggs + 1st instar present.
No ♂♂. - Colony comprises 1 ♀ only.

Parth ♀? One colony with ♀ + brood of
1st instar found in bark crevices on under-
side of elevated horizontal log. Scutellinia
colonies nearby by but easily distinguished
by naked white silk.

Discontinued culture 8 mi S.E. Thyssville

Started during July from one juv. ♀ with purple
web under bark flake.

Matured and produced young without mating.
Discontinued Jan 28 with 2nd instar young.

III-5-58

24 mi N Livingstone N.R.Hod 1180 M

Low savanna woodland on Kalahari sands
Recent rain

Embia penult ♂ ♀ brick red colonies under
fallen limbs, cut trees, etc. 1 specimen per web
webs often coated with sand not too common
(1 culture)

Same habitat, small bluish tunnels on
log or branch undersides on ground
Prob teratembiid and Scutellinia in same
culture

5. Rhodesia

Umtali Heights 1400 M March

Ridge above ~~at~~ Umtali grassy with sparse low savanna. Scattered small stones.

- ① Tiny terat in matted leaves beneath usually smaller stones in almost grass-free places fully exposed to sun. 1 ♂ mature penult and juv ♀ collected and cultured.
- ② Small Embia in similar situations, also webbing bases of grass tufts.
- ③ Reddish brown (in juv. stages) terat in lichen clumps on shaded rocks and tree trunks appears to be same as Vumba forest species.
- ④ Larger Embia in matted leaves beneath stones in deeper grass ~~also~~ also grass bases.

5. Rhodesia

Umtali Public Camp (S. of Xmas Pass)
1300 M March 16, 1958

- ① Reddish-brown terat (possibly same as #3, opposite) in matted leaves beneath stones in dense savanna woods, also in cracks on underside of ^{dead} limbs on ground. All penult ♂s + juv. ♀s.
- ② Embia same as #1 3 penult ♂ 1 mat. ♀

VUMBA (20 mi S. Umtali) March 16, 1958
Dense mountain forest, trees coated with moss + lichens.

Roadside trees (especially) with terat colonies spread out beneath lichens and moss on soft bark possibly 2 spp.

Several mat ♂s but mostly penult ♂ & ♀ occasionally 2-3 in one web but usually 1. Reddish-brown in color.

Umtali III - 17-58
"Flame in the Forest" shade trees
along main sts.
Scelambia very abundant esp.
on upper limbs
radiating tunnels extensive
Fo and 2-3rd instars this date

Umtali Camp site III-17-58
Blackish Embia in large colony
on road bk in full afternoon sun
perults + 2 adult ♂.

Must be *Cystembia*

298
277
21

Onidemia n. gen sp. March 25, 1958
First encountered 21 mi S. Messina, Transo.
Semi-desert brush-like trees and larger trees
occasional baobab. ^{grassy} sandy plain in
drainage of Limpopo River at 660 m
Beginning of dry season no rain for
about 20 days.

Embiids in individual tunnels in dry
lichen-free, bark crevice. Whitish, frass-
free tunnels radiate short distance along
bark flakes. Embiids about half grown
no wing pads evident. Rest in densely
spun nest in crevices.

Specialize in bark of *Brachystegia*
which is very rough and lamellated
Not found in Acadia. Occurs on living
trees but especially on dead branches
and fallen trees with loose bark.
Tunnels extend beneath bark.

Also found at N. base of Zoutpansberg
at entrance to Wyllie's Port in rocky Gyn
800 m, early instar.

Type lot *O. transvaalensis*

ONCIDEMBIA ♀ SP.

6 Mi N. Olifanta River (17 Mi S.E. Gravelotte)
425 M. Bushy savanna rolling hills
with kopjes and ridges of coarse granite,
high grass, beginning of dry season

Oncidembia in matted ^{dry} leaves at edges
and loose dry soil beneath granite
stones in shaded side of kopje.

Wings very white, dense (embryos invisible
within). Silks somewhat elastic.

Some females mature, 1 penult ♂, some juv.
orange-headed Embia in some niche

Embryos apparently absent in Mtn forests
west of Izium at 1250 M

Plattenberg Bay. (Sealevel). C.P. IV-22-58

Small-medium embryos gen sp.?

Penult ♀ + ♂? + 2-instar on —

In bushy tree growth on ten soil (not
sand) just inland on E. side river
soil with cobble stones on and in surface
recent ruin. Embryos not under stones
but in leaf litter and leaf mould as
well as thinly moss covered ground mixed
with grass. Found in rather exposed
dry edges of bush — not in deep shade.

Teratembia

Jongomika: Mbisi Forest 2180 M II-14-58

Moosy bark crevices in heavy forest with
numerous high Euphorbia trees ♀s and
eggs collected and cultured. Culture died
out without producing ♂s.

Oligotoma saundersii record

Angola: Capela 110 M VI-1-58 (Rosa)

On road bank ledges, tunnels
radiate on rock surfaces but penetrate
deep into rock crevices — ♂s in vial

Field notes Forêt de Banco, Abidjan VI-19-58

Plea Flaking bark and vine mat on large forest trees. Tunnels radiate from such niches forming large sheet webs. Even web, not showing tunnels covers whole surface of this. This silk bluish-white and speckled with reddish bark dust so as to appear purplish. Results in good camouflage of silk against bark. Bark beneath silk devoid of surface moss or lichens. Many microphytoids in tunnel system.

Silk: Intricate pattern of silk tunnels radiate on surface of bark from a protective clump of lichens, moss, or bark flakes. Silk chalk-white devoid of surface debris.

Embia sabulosa Enderlein

Collected at type locality KUBOB, a ranch about 4 mi S. Ans (Ranch dates from 1885). Locality characterized by granite kopjes and small canyons (granite heavy in calcite - not typical granite). Drainage lines with scattered *Acacia*. Rained within a few days at time of visit May 6, 1958. Ground very damp just beneath dry surface. Surface coarse granite sand; no grass.

Embroids found under stones in open as well as beneath trees. Tunnels very fresh, thin, transparent. Spun within the last few days because of stimulus of rain. Radiate on under surface of stones and in twig-leaf debris at edges from a main subterranean burrow (often following dead root). These burrows penetrate compact granite soil to a depth of a foot or more and ^{serve as retreats} ~~constitute the place of evasion~~ during extreme dry periods.

Embiids present near surface and edges of stone apparently attracted by heat of sun. Males and females in adult stage present with late instars of both sexes.

At least 3 ♂ and 3 ♀ were taken from a single tunnel at edge of one stone. Is often in company of males. Mating must frequently occur between brother & sister.

D. hybocarpus

ONCIDERBIA N.SP

15 mi N. OKAHANDJA, S.W.A. 1460 M

10 May 1958

Long narrow rocky ridge in savanna thorn bush and grass. Dry season, ground and vegetation parched. Embiid tunnels fairly numerous under stones on S. exposure. Many stones turned by baboons must be a hazard to embiids here.

Most tunnels devoid of life at surface. One adult male collected $\frac{1}{4}$ " down. One late penult ♂ 6" down in twisted vertical tunnel. Several 1st instar collected in dense tunnels clinging to underside of rocks. About 20 1st instar collected in subterranean tunnels 10" deep in another colony.

Season unusually dry.

Oncidembia (?)

7 Mi N.V.P. de Eca, Angola 17 May 58
1100 M extreme dry conditions

Mossy woodland with small pines
bordered by larger Oak-like trees, occasional
Baobab and Pterocarpus.

Small embiid colonies in dry bark, no
embids observed, must be deep in bark.

Prob Paroligembia and Sulcembia

Large colony of big sps in splintered end
of dead limb on ground beneath tree.

Flight of large male Oncidembia begins
about 6:30, attracted to light as late as
7:15. Temperature at 8:00 66°F. 6 collected

Rain stimulus apparently not essential.

5 Mi S. Villa Ariaga, Angola, V-21-22-58,

1000 M, narrow rocky cyn at base of escarp.
small flowing stream through granite formation.
Deciduous thorn forest with scattered baobabs
Dry season.

Embia? under stones in dense shaded
thicket. Ground covered with small dead
leaves. Tunnel usually with one dark
reddish half grown? individual. About
five cultured.

Paroligembia? colonies on surface of
large, vertical-sided, granite boulder
15' high. Main colony in crevices and under
exfoliating pieces. tunnels radiate on
surface of rock to lichen clumps. About
12 collected including some mature females.

18 Mi S.W. Villa Ariaga V-22 630 M
Rough granite country side with dry
deciduous, dense forest. Embiid tunnels
under imbedded long dry logs. Tunnels
fresh but no ~~embids~~ collected it seems.

11 Mi N.E. Sa da Bandeira V-20-58

1700 M Brachystegia woodlands much like Katanga. Dry season

Embiid colony with at least one brown + cream ♀ ~~in~~ under basal bark of fresh stumps. Tunnels under bark to ground level but little evidence of external tunnels and none seemed to go below ground level

1 ♀ same sp in small tunnel under granite stone. No excavation needed.

20 Mi N.E. Sa da Bandeira V-21-58

1650 M dry season. High sav. woods — better than above.

Embiid colonies radiating in surface lichens & long dead small logs & branches on ground. Tunnels retreat into old dry mud termite galleries within. Here embiids are concentrated many to a tunnel. Perult and antiperult ♂ & ♀ (about 35 cultured)

May be some brown + cream species mixed in this culture.

Paroligembia angolica V-23-58

6 Mi N.E. Moamedes 120 M

10 Mi N.E. " 180 M

Type locality about 15 mi (25 KM) N.E.

A fog bank with a ceiling of about 1500' hung over the coast and extends about 35 mi (by road) inland.

In the above localities the ground and rocks are frequently fog-dampened. The soil is encrusted with a blackish lichen and the rocks are coated with thin lichens. At the 10 mi locality green tuft lichens were present. Otherwise the region is devoid of vegetation except for an occasional prostrate shrub. Formation appears to be elevated sea bottom with layers of sand alternated by harder rock which breaks off at edges of mounds.

Embiids occur on sides and tops of these rocks with colonies centered on a

pit, crevice, or radiate up from beneath stone. Colonies usually form a silk matt inhabited by many individuals.

All stages of development at this date

Angola

5 Mi. N.W. Nova Lisboa V-27-28-58

Low savanna woods, dry season 1740 M.

- ① Reddish Embria (?) under small stones. Tunnels in matted leaves. One embryo per stone most at ground surface (ground damp under deep imbedded stone) About 5 cultured no sign of wing pads.
- ② Scutellaria (?) in bark of dead standing tree. Weathered tunnels on coarse dry exterior bark, Dense criss-cross of smaller tunnels under this layer unoccupied. Embryos in damp rotting wood of cambium layer About 10 cultured 3rd instar.
- ③ Scutellaria (?) possibly above sp. Tunnels radiate on surface of hard dome-shaped termitaria. Embryos in dense mass of silk beneath earth flake or on sides beneath appressed leaf.
- ④ Mass of embryo tunnels, between green leaves of low herbaceous plant. Not connected with ground. Could be Embrisa but may be fresh occurrence of Scutellaria

V - 29 - 58

13 Mi N.W. Villa Teixeira da Silva 1500 M

Semi-cleared low savanna woods, dry season
but damp under larger logs

Reddish Embia juv. (2-3) under fresh bark
roll from fallen bee hive.

Scolymia colonies on limbs - no culture

25 Mi N.W. V.T. da Silva 1720 M

Ridge with dry savanna woods. Crest
hard pan of reddish coarse granular
rock.

① Small reddish juveniles under above stones
esp. in contact with hard pan. Tunnels
small bluish-white. Occasionally radiate
up side of rock: No sign of large tunnels

② Larger more orange juvs (prob Embia)
under logs & ordinary stones. One insect
per tunnel system as above.

Above 2 spp mixed in one culture

N-29

2 Mi N. Hengue 1550 M ^{Seal in} ^{dishes crust}
of fresh felled tree in high sav wds. May be
one terat in culture from branch on ground

v-31-58

Machadoembia sp.

Very common throughout coffee plantation on granitic ridge west of QUILEDA. This area was once a continuous tropical forest of the Mayombe type. Has since been semi-cleared for coffee growing. Embiids on all sorts of trees except smooth-barked (at times in crotches of these). Extensive matted tunnels: evident but badly weathered. Occasionally groups of embiids start new tunnels under the protection of these matts. Most embiids were found in fresh tunnels issuing from beneath bark flakes - usually one embiid per tunnel. Cut off, splintered sapling stumps and rough palm trunks also favored.

Most males were parvult, two were adult

Wells coated with fine debris

Parthangeretic? sp. some locality

On dry splinters of small stumps (bark long gone). About 2-3rd instar. Wells highly elastic, white.

Sulembia?

Same place and niches. Bluish-white tunnels ramify in pattern.

Egg note: Eggs of Apterembia from 6 Mi N.
Whittleson C.P. laid ^{VI-10} in irregular cluster
not plastered to surface. Mixed with faeces
individual eggs often, but not always, coated
with grayish material and silk.

Habit: Males of Macrodermia from
Roca Emilia Angola rest in numbers
with only antennae protruding from
upper extremities of tunnel. When one
leaves the tunnel others do likewise

Egg note: Oncidermia from 6 Mi N. Olifant
^{VI-10} scattered in top of culture, one group
forming a ^{ball like} cluster of about 10 eggs stuck
together but not adhering to a surface
Egg surface white, devoid of debris covering
Shape distinct operculum lid convex,
the curve following that of egg ends.

Egg cluster reminds me of blastula. Female
observed to seize each egg ball ^{in jaws} and transfer it
deeper in tunnel system. Sample eggs preserved

Black Teratermbeid ♂ apterous or alate

Mountain forest zone with Podocarpus and bamboo. Embryos on mossy bank, especially on roots and logs protruding.

52 Mi N.W. Nakuru, Kenya X-15-57

2700 M

Did not culture well died out early in '58

15 Mi West Kampala, Uganda 1200 M

Large forest reserve of congo-type rain forest. Careful search revealed only one small colony in bark crevice - prob a teratermbeid, only 1 ♀ cultured but apparently virgin. XII-1-57

Scelambria common in stony road bank in grassland hills 25 Mi S. Mbaramba Uganda XII-6-57 1375 M. Culture died out.

Plasembia sp.

Crest plateau of Mt Hoyo, Congo
Mossy bark crevices of small tree
dark ♀ and young X-6-57 3rd instar
1-1-58 but culture died out

Embryos very rare in eastern Ituri
forest region. This was the only colony
seen in two days of search.

Scutembia

Teratembid

In wet mtn. forest 78 Km W. Astrida
Mossy bark of large trees in virgin forest
2350 M XII-10-57 Culture died out
but both ♂ & ♀ matured.

Teratembid

In mtn forest (Kapkwata Forest Res)
on N.E. side of Mt Elgon.

Under bark flakes of large trees
Culture died out.

Teratembid

20 mi S. Thompson's Falls 2600 M XI-27-57
Mtn forest with high, dense bamboo. Colonies in lichens
on dead bark, especially on dead vine hanging
from tree. Colonies rare. Culture died.

Dumbrody C. P.

Broad alluvial valley in desert scrub. Low
brush on gravel side slopes. alt. 160 M
Embiids beneath and between piled cobble stones
on silty soil near O'Neil's old mission school.

Series definitely topotypic capensis. Culture
made on IV-18-58 half grown nymphs. Developed
into two types of males (distinct species?)

Weir Farm C. P. 2 mi W. St Marks 940 M
(Stop 524) (N. E. of Queenstown) IV-5-58

Grazing land in low acacia, sparse savanna.
Most collecting done on flat-topped bluff with
flat stones and over brinks in semi-shaded
thickets. Apparently 2 spp. of Aptarembia

Abandoned cultures

Uganda: 15 mi W. Kampala in forest reserve
Only 1 ♀ found and cultured 1200 M

XII-1-57 I think no ♂ were produced

Uganda: 25 mi S. Mbarara 1375 M

Cracks in stones and ~~at~~ road banks in
grassy hills XII-6-57 Schlembia

Congo: Mt Noyo crest

3rd instar in dead sapling X-6-57

Prob Plesembia

Urundi: 78 Km W. Astrida 2350 M

Mossy bank in virgin Mtn forest

XII-10-57 Teratembid

10 MI. N. UBOMBOMATAL
NR PONGOLA R. 160M
N-5-58 GEN. BARK

18 MI. S.E. BURURI
1600M N-8-58

43 MI. N. ALBERTVILLE
1200 M I-12-58 RD BK
SCELEMBIA AGRIC AREA

MOSSY ROCK IN DEEP SHADE MTN.
FOREST ALSO TRUNK & TRAIL BK
2000 M. WEST SLOPE RUWENZORI
K-25-57

Genetic drift survival of mutant
genes in small isolated populations

AFRICAN TRIP 1957-58
EMBID CULTURES

